Mullica Watershed Planning Project
Agriculture Technical Focus Group Meeting - June 18, 2002
Summary of Discussion

TFG Members Attending *(* indicates Steering Committee member)*
Ferdows Ali (FA), USDA
Bill Bamka (BB), Rutgers Cooperative Extension - Burlington County
Michael Celestino (MC), Shellfisheries Institute
Ray Crema (RC), Shellfish Industry
*Bill Cutts (BC), Pinelands Agricultural Advisory Committee
Gabor Grunstein (GG), NJ Farm Bureau
*Steve Jacobus (SJ), DEP
*Peter Oudemans (PO), Pinelands Science Advisory Committee
Dean Polk (DP), Statewide IPM Agent
Denis Shaefer (DeS), Nutrient Management
Dan Schiffhauer (DaS), Ocean Spray Cranberries
Rick Van Vranken (RV), Rutgers Cooperative Extension - Atlantic County

Pinelands Commission Staff Attending
Larry Liggett [LLL] (moderator)
John Stokes [JCS]
Chris Krupka [CK]
Rich Federman [RF]

[indicates comments made by staff]
(indicates comments made by members of the public)

Question : What is the status of berry agriculture in the Watershed?

DaS: Cranberry industry has struggled due to oversupply … unlikely to grow but is stable and will continue to thrive.

BC: Expansion opportunities are limited … wetlands crop limited by wetlands regulations … general permit has important ramifications including water recovery in wetlands, BMPs.

PO: Production part of cranberry business can continue to grow through better management practices, increased efficiency (Rutgers studies contribute) … cranberry business is unified through Ocean Spray … blueberry industry more fragmented … continues to grow in terms of productivity … fierce competition from outside NJ … blueberry consumption growing nationwide … peach industry in NJ shrinking.

DP: Compared to other types of crop agriculture, blueberry ag. is not very fragmented … actually very concentrated … marketed through 3 or 4 organizations.

[What economic issues are facing blueberry farmers ?]

PO: Blueberry farms are heavily dependent on migrant workers.

Question : How consumptive are the cranberry & blueberry industries in terms of water use?

DaS: Cranberry growers utilize the same water use patterns for the most part.

BC: The problem is how to define "consumptive" … most water used in cranberry farming goes back into the stream … significant irrigation for frost protection - doesn't evaporate … water is often passed from farm to farm … Mullica Water Supply Plan shows 80% of water used by cranberry industry.

[Is there data available on water consumption by cranberry growers ?]

BC: Very difficult to study … water is currently counted several times as it passes through the system … public gets wrong idea, thinks water use is similar to what happens at a sewer treatment plant … aware of no current studies

FA: DEP uses monthly water use data that leads to double counting - they acknowledge this inaccuracy … an "accounting problem" that DEP has agreed to study but hasn't as of yet … estimates of cranberry water use should drop considerably.

BC: Cranberry users get charged for water use but not credited for groundwater recharge.

[How about blueberry water use ?]

PO: Some blueberries are grown in wetlands, some in uplands - different water use ramifications.

DP: Blueberries are grown on poor soil … often their water recharge is overlooked as well.

RV: Some irrigation in wetlands is still necessary - overhead sprinkler for frost protection … the trend is away from overhead and toward drip irrigation … this is incentive-driven.

BB: People will convert to drip if they are paid to do it.

FA: Money might be available through the federal Farm Bill for these programs.

Question : How widespread is IPM use among farmers ? How much needs to be done to inform them about IPM ?

DaS: IPM is widely used in cranberry industry.

DP: Blueberry IPM has made great strides in last 10 years, now focusing on disease control … ability to work with individual growers is limited by lack of funding & staff … Rutgers charges a growers fee for participation in program except for blueberry industry - financed by grants which are insufficient to cover most of the acreage … situation is different than with peaches … peaches have more growers, less acreage … data from soil testing is provided with recommendations to growers, but they can't be enforced … monetary incentives are the key … more funding for IPM would help improve water quality - decreased pesticide use … we need data showing where the specific pollutants are.

PO: Are the impacts of farming decreasing significantly ? … fewer acres, more BMPs … trying to hit a moving target, we need to identify specific problem areas and pollutants.

[There are difficulties in isolating impacts on water quality over time due to changing land use patterns - ag & development.]

PO: Environmental Impacts Quotient is a good tool.

DP: Incentives for farmers are the key … EQIP Program is an example … IPM should be tailored to specific locations/problems … monitoring can save you 20-30%, practice-specific IPM can increase savings to 60-70%.

[We've looked at pesticide degradation on golf course, is it similar in the fruit industry ?]

PO: There's a movement toward products that degrade.

BC: New environmentally-friendly products cost more (pheremones), farmer has to weigh cost vs. benefit … IPM Program could be enhanced through incentives or subsidies.

[What is the best use of monetary incentives ?]

DeS: Nutrients (nitrogen/phosphorus) are a big issue, act differently in soil & water, can be controlled … cranberry growers use fertilizer very effectively … row crop (freshwater vegetable) ag grow 2-3 crops/year on same acreage … constant plowing leads to erosion, release of phosphorus from the soil … incentives should target erosion control (windbreaks ?) and phosphorus reduction … also should focus on nutrient management plans to reduce release of phosphorus … farmers could use less nutrients but are unwilling to change, fear losing some active acreage.

[Are there other BMPs that are available ? How can we get the word out better on BMPs ?]

DeS: Educating farmers is key … many sellers are content with "same old" approach to business, keep selling 10-10-10 since it's what the farmer knows.

PO: Similar to homeowner education, need demonstrations, teach by example.

BC: Cranberry industry converted to using 5-6 tailored smaller fertilizer applications … industry is small so it's easier to work with.

DeS: In cranberry & blueberry industries the growers are all either working for same company or toward same goal - aides cooperation … row crop growers are numerous, dispersed, and in competition with each other .. environment not conducive to trying new things.

BC: Turn competition to an advantage - show growers they can get the same product with less inputs.

DeS: Growers using the BMPs successfully don't want to share the knowledge with competitors.

BC: Education is the bottom line.

DeS: Growers practices are difficult to change … they tend to use the same products.

DP: Need to make a list of what IPM & ICM offer.

Question : Where does the turf industry stand & where is it going ?

DeS: Will continue to grow with housing development, will crash eventually … little if any use of

BMPs … bottom line approach, same problems as row crop farmers.

[Has it been difficult getting the word out to turf farmers on BMPs, etc. ?]

GG: Farm Bureau has never gotten a response from turf farmers, no success in getting them involved in programs.

DeS: Turf farmers are getting better with fertilizer use for economic reasons.

BB: Farmers don't like to get involved in general planning - view them as regulations … need to be brought specific problems to get involved.

DP: Turf farmers don't use RCE, self-contained … need to offer incentives.

RVV: They're not going to spread excess product or water on 300 acres of turf - too expensive … turf farms have more infiltration than crop farms.

DeS: Turf = 1 crop/year

Question : What is the status of the shellfish farming industry ?

MC: The mouth of the Mullica has oyster beds … water quality issues prevent them from being simply harvested … there's been a switch to aquaculture in the Great Bay … fecal coliform the major water quality issue … brown tides (caused by excess nitrogen ?) also have been a problem … clam/oyster larvae very susceptible … Great Bay is an "approved" area, just west of the mouth of the Mullica is "restricted" (open waters approved for harvesting year-round) … shellfish are easily impacted by NPS pollution.

RC: Brown tide is a big concern, it moved south last year from Barnegat Bay to just north of the Absecon Inlet … impacting clam industry - shuts down growth of organism … removes food from the water … may have caused die-offs in 1980s & 90s … macro algae blooms last couple years filled the bays … perhaps caused by changes in water quality ? … make shellfish industry more labor intensive … brown grass in Bay last few years helps increase crab population.

MC: More nutrients lead to more algae which can lead to eutrophication … brown tide prevents shellfish from feeding … it's not a human health concern … monitoring started in 98/99 at Leeds Point station.

RC: Local inlets are shutting off (filling in) leading to less exchange of water … may cause increased concentrations of nutrients.

FA: DEP has opened up 1000s of acres for shellfishing.

MC: Most of that is in the ocean, but trend has been toward greater acres for shellfish beds … 2002 has seen increases in Great Bay, Raritan Bay, etc. … this trend mostly due to improved fecal coliform conditions.

RC: Regionalization of wastewater management also a factor.

Question : How is agriculture changing in the basin? What are the new types of agriculture?

DeS: Little change occurring … one overlooked problem is the Asian farming community … large contributors to product overuse … sometimes infest farm with disease then simply move to new land … spread disease through irrigation water … language barrier a problem in education.

[Are greenhouses a problem ?]

DeS: Not much runoff from greenhouses.

FA: Are livestock an issue ?

DP: Production of peaches & apples in NJ is dropping fast - can't compete with imports from California … these farms can't be converted to berry farming … grape vineyards are increasing … traditional growers are looking more at other commodities.

RVV: Big farms in Hammonton are trying to increase productivity & efficiency, growing more crops to lengthen growing season … introducing new row crops to get more of the market … may add spring crop (peas) to supplement fall crop (corn) … peppers & tomatoes need plastic coverings that create runoff problems.

DeS: There is an extreme shortage of trained staff in fertilizer industry to get farmer the facts about fertility … soil test reports are being ignored.

DP: Question as to whether farmers are being insistent enough when requesting something other than the usual (10-10-10) … they want incentives to be more persistent.

RVV: What are the cost differences ?

DeS: Phosphorus holds the other ingredients together in liquid form.

[Same trends in Burlington County?]

BB: Grain farmers fairly low-impact already for economic reasons … "backyard farmers" a big problem - no proper management, dispose of fertilizers improperly, they are "farming blind" … they need education & outreach.

DeS: The watershed is set up ideally for farmettes.

FA: Any water quality "hotspots" in watershed ?

[STP in Hammonton was dumping to a stream until recently … Mullica Report data shows impacts in western part of watershed.]

FA: How about septics ?

[We are looking at 5 innovative systems for use down to 1 acre lots … they are more expensive … a future TFG will deal with wastewater management.]

Question : What other challenges/issues face the agricultural community ?

BB: Waiting for draft CAFO regulations to come out from EPA … will have discharge permits as point sources … animal units not defined.

DeS: Not many livestock operations in S. Jersey - some dairy farms, some chicken.

BB: Animal farming industry may fold.

DeS: NJ has horses - not affected by CAFO regs … nitrogen on vegetable farms higher than chicken farms … concern is phosphorus.

FA: Not much livestock impact in Mullica … DEP is looking for pig farms, they seem to be going out of business … horses are here to stay.

DeS: Some are trucking in chicken manure from Delmarva for organic matter - don't take nutrients into account.

RVV: Prime watershed for aquaculture - shellfish, clams.

MC: There are several proposed areas in the Great Bay for aquaculture sites.

RVV: The biggest issue for Mullica farmers is economic viability.

Public Comment

(Representation on panel is skewed, no property rights group … watershed is reservoir for Atlantic County development … Pinelands farmers don't have the financial advantages (subsidies) of international farmers.)

(Meetings shouldn't be held in summer when farmers are busy - should hold in winter.)

(Water retention is a critical issue in the Pinelands.)

[State legislation says Pinelands water can't be transported more than 10 miles outside Pinelands boundary. DEP is moving toward keeping water within the basin where it is used.]

BC: Cranberry growers depend on keeping water within the Pinelands.

Summary - Most Critical Agricultural Issues

SJ: Education & Outreach : including backyard farmers, minority groups … water moves through the Pinelands & affects other farms … large operations are the most efficient.

DP: NPS Pollution : need to present data on specific NPS problems with locations, sources … then develop incentives to deal with specific issues.

GG: Education & Outreach : there's a lack of monitoring data … need to give farmers examples of specific ecological impacts & solutions to problems.

DeS: Education & Outreach : need more trained staff to give demonstrations, show advances in nutrient management … mandatory programs don't work … need to stress learning retention.

PO: Identify Problem Areas : specific to nutrients, pesticides, etc. … then prioritize … publicize success stories.

RVV: Better Data : we need to know more about the "dots" on the water quality maps … ag vs. urban, monitoring data & sources … then identify practices to deal with specific problems … growers are looking for ways to reduce costs, may tie in with environmental goals … small growers need the most guidance.

BB: Identify Problem Areas : need more information to take to farmers … are projects cost effective - do cost/benefit analysis.

MC: Impact Assessment for Nutrients : is brown tide caused by increased nutrients ?

DaS: Target West Side of Basin : focus on problem areas and determine which impacts are from agriculture and which are from development.

BC: Identification of Problems, Prioritization, Education

FA: Action Now Approach : money is limited, we need to identify specific, manageable problems to focus resources on … education is important basin-wide … water supply study on cranberry industry needs to get done.

ACTION ITEMS / NEXT STEPS

1. Pinelands Commission staff will work with appropriate TFG members and other experts to obtain requested data/information:

    - Locations of turf farms in the watershed.
    - Data on impacts of turf farms, potentially polluting practices, BMPs, etc.
    - Data on impacts to aquaculture and shellfishing areas in the Great Bay.

The information obtained will be used to develop additional Action Now projects as appropriate.

2. **Potential Action Now Projects:**

    - **Study of water consumption by cranberry growers (taking into account the water that is recycled/reused through reservoir system).**
    - **Identify funding/grants for growers to convert to drip irrigation and work with farmers to obtain funding.**
    - **Identify BMPs for turf farming and work with growers to implement.**
    - **Identify BMPs for aquaculture and shellfishing and work with fishing community to implement.**
    - **Identify funding/grants for growers to implement IPM strategies and work with farmers to obtain funding (partner with RCE)-create "model/demonstration farms."**
    - **Identify areas of the watershed impacted by agricultural NPS; develop and implement BMPs to reduce pollution.**

- ✍ **Education and outreach to "backyard farmers" and homeowners about environmentally compatible farming/gardening practices (workshops, brochures, etc.).**

3. Commission staff will share data/information and recommendations with TFG members, the Steering Committee and the public and solicit input.
4. Commission staff will work with watershed partners to implement recommendations.
5. Next TFG meeting will be organized to review progress and solicit additional expert input.